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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,852	09/30/2003	Jacqueline E. Heard	MBI-0022CIP	1145

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MENDEL BIOTECHNOLOGY C/O MOFO SF  
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SAN FRANCISCO, CA 94105

EXAMINER
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KRUSE, DAVID H

ART UNIT	PAPER NUMBER
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1638

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/675,852

Applicant(s)

HEARD ET AL.

Examiner

David H. Kruse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 10-13, 15 and 20-35 is/are pending in the application.
- 4a) Of the above claim(s) 20-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 10-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/4/2005; 1/29/2007</u> .                                     | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1-6,10-13 and 15 in the reply filed on 31 July 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 20-23 are withdrawn from further consideration pursuant to 37 CFR § 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 31 July 2006.
3. Newly submitted claims 24-35 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The instant claims are directed to transgenic plants having altered flowering time and a method of making, a distinct invention from the invention originally claimed. The Examiner notes that claim 35 recites "increased tolerance to abiotic stress" but this limitation lacks proper antecedent basis in the method of claim 33 and cannot be examined on its own with the elected invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 24-35 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR § 1.142(b) and MPEP § 821.03.

***Priority***

4. Applicants' claim for the benefit of a prior-filed application under 35 U.S.C. § 119(e) or under 35 U.S.C. § 120, 121, or 365(c) is acknowledged. Applicants have not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. §§ 119(e) and 120 as follows: The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. § 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed applications, Application Nos. 09/713,994; 10/112,887; 10/225,068; 10/225,066; 10/374,780; and 10/666,642 (those applications the claim priority to), fail to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. § 112 for one or more claims of this application. Application Nos. 10/412,699 and 09/533,030 provide support for SEQ ID NO: 4 and the recited conserved domain, and the claimed phenotype, but not for the recited percent identity or the subdomain of instant claims 2 and 3. Consequently the subject matter of the instant claims is given priority of the filing date of the instant application, that being 30 September 2003 for the purposes of applying the prior art.

### ***Drawings***

5. The petition to accept color photographs and color drawings in the petition filed under 37 CFR § 1.84(a)(2) is granted.

6. The drawings are objected to because Figure 6 fails to comply with the Sequence Rules. If the disclosed sequences are in the Sequence Listing, then an amendment to the Brief Description of the Drawings would correct the issue. If not then corrected drawing sheets in compliance with 37 CFR § 1.121(d) are required or other appropriate action in reply to the Office action is required to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR § 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

7. The amendment filed 16 December 2004 is objected to under 35 U.S.C. § 132(a) because it introduces new matter into the disclosure. 35 U.S.C. § 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The petition filed under 37 CFR § 1.78(a)(3) on 16 December 2004 was dismissed in the response mailed on 22 February 2007, consequently the amendment to the specification, page 1, lines 5-21 would constitute new matter by incorporation by reference. Any additional matter introduced by incorporation would also be considered new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

8. The disclosure is objected to because of the following informalities:

Table 6 as amended on 16 December 2005, page 8 of the amendment, is objected to because the top row of information is unreadable.

Page 29 fails to comply with the Sequence Rules. See also page 25, line 11, and page 101, lines 31-33. This issue will not be held in abeyance and must be corrected in response to this Office action.

Appropriate correction is required.

***Claim Objections***

9. Claims 2 and 3 are objected to under 37 CFR § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation

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"Asn-(Xaa)<sub>4</sub>-Lys-(Xaa)<sub>33-34</sub>-Asn-Gly" at claim 2 and "Ser-(Xaa)<sub>9</sub>-Asn-(Xaa)<sub>4</sub>-Lys-(Xaa)<sub>33-34</sub>-Asn-Gly" at claim 3 appear to be broader in scope than "at least 83% identical to amino acid coordinates 26-116 of SEQ ID NO: 4" at claim 1.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-3, 5, 6, 10-13 and 15 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to a transgenic plant having increased tolerance to an environmental stress, including osmotic stress, high salt, drought, cold and heat, said plant comprising a recombinant polynucleotide having a nucleotide sequence encoding a polypeptide having a conserved domain with at least 83% sequence identity to a conserved domain of amino acid coordinates 26-116 of SEQ ID NO:4. The claims are also drawn to methods for making said transgenic plant.

The specification describes a 1065 bp cDNA nucleotide sequence of SEQ ID NO:3 (G482) obtained from *Arabidopsis*, encoding a 190 amino acid polypeptide comprising SEQ ID NO:3 and having an asserted conserved domain from amino acid 26 to amino acid 116 (pages 31-33; sequence listing). The specification additionally

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describes transgenic *Arabidopsis* plants that ectopically overexpresses SEQ ID NO: 3 encoding 4 as exhibiting increased germination when grown on high salt or mannitol containing medium, increased germination after 6h exposure to 32° C and a slightly early flowering phenotype (page 92). The specification describes G485 (SEQ ID NO: 5 encoding 6), G481 (SEQ ID NO: 1 encoding 2) and G3395 (SEQ ID NO 73 encoding 74) in Table 6 on page 95 of the specification, but the table describes varying phenotypes of the transformed plants, for example G482 gave heat tolerance but not drought tolerance, but G481 did not give heat tolerance but did give drought tolerance. The specification further describes the identification using database sequence search tools of asserted orthologs and homologs of SEQ ID NOs: 3 and 4 in *Glycine max*, *Zea mays*, *Gossypium hirsutum*, *Lycopersicon esculentuma*, and *Solanum tuberosum* (pages 78-80 and Table 5).

The specification also does not describe nucleotide sequences encoding a genus of polypeptides having a conserved domain with at least 83% sequence identity to the conserved domain of amino acid coordinates 26-116 of SEQ ID NO:4. The specification further does not describe the nature or extent of the structural or functional homology between the disclosed sequences of SEQ ID NOS: 3 and 4 and the orthologs and homologs identified in databases.

In addition, the specification fails to provide sufficient antecedent basis for the limitations in claims 2 and 3; "Asn-(Xaa)<sub>4</sub>-Lys-(Xaa)<sub>33-34</sub>-Asn-Gly" at claim 2 and "Ser-(Xaa)<sub>9</sub>-Asn-(Xaa)<sub>4</sub>-Lys-(Xaa)<sub>33-34</sub>-Asn-Gly" at claim 3. The specification at page 29



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describes specific amino acids to which Claims 2 and 3 recite any amino acid would be sufficient.

Hence, it is unclear that Applicant was in possession of the invention as broadly claimed.

The Federal Circuit has recently clarified the application of the written description requirement. The court stated that "A description of a genus of cDNAs may be achieved by means of recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to members of the genus, which features constitute a substantial portion of the genus." See *University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1569; 43 USPQ2d 1398, 1406 (Fed. Cir. 1997). The court has also affirmed the PTO's applicable standard for determining compliance with the written description requirement, quoting from the PTO's Guidelines for Examination of Patent Applications Under the 35 U.S.C. 112, P1, "Written Description" Requirement, 66 Fed. Reg. 1099, 1106, where it is set forth that the written description requirement can be met by "show[ing] that an invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics ... i.e., complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between function and structure, or some combination of such characteristics." See *Enzo Biochem Inc. v. Gen-Probe Inc.*, 63 USPQ2d 1609, 1613 (CAFC 2002).

12. Claims 1-3, 5, 6, 10-13 and 15 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for a method of making and

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a transgenic plant made, comprising a recombinant polynucleotide encoding a polypeptide of SEQ ID NO: 4 that exhibits increased germination when grown on high salt or mannitol containing medium and increased germination after 6h exposure to 32° C, does not reasonably provide enablement for methods of making and transgenic plants made comprising other recombinant polynucleotides or for methods of making transgenic plants exhibiting other phenotypic characteristics. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The claims are drawn to a transgenic plant having increased tolerance to an environmental stress, including osmotic stress, high salt, drought, cold and heat, said plant comprising a recombinant polynucleotide having a nucleotide sequence encoding a polypeptide having a conserved domain with at least 83% sequence identity to a conserved domain of amino acid coordinates 26-116 of SEQ ID NO:4. The claims are also drawn to methods for making said transgenic plant.

The specification teaches a 1065 bp cDNA nucleotide sequence of SEQ ID NO:3 (G482) obtained from *Arabidopsis*, encoding a 190 amino acid polypeptide comprising SEQ ID NO:3 and having an asserted conserved domain from amino acid 26 to amino acid 116 (pages 31-33; sequence listing). The specification additionally teaches transgenic *Arabidopsis* plants that ectopically overexpresses SEQ ID NO: 3 encoding 4 as exhibiting increased germination when grown on high salt or mannitol containing medium, increased germination after 6h exposure to 32° C and a slightly early flowering phenotype (page 92). The specification teaches G485 (SEQ ID NO: 5 encoding 6),

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G481 (SEQ ID NO: 1 encoding 2) and G3395 (SEQ ID NO 73 encoding 74) in Table 6 on page 95 of the specification, but the table teaches varying phenotypes of the transformed plants, for example G482 gave heat tolerance but not drought tolerance, but G481 did not give heat tolerance but did give drought tolerance. The specification further teaches the identification using database sequence search tools of asserted orthologs and homologs of SEQ ID NOS: 3 and 4 in *Glycine max*, *Zea mays*, *Gossypium hirsutum*, *Lycopersicon esculentum*, and *Solanum tuberosum* (pages 78-80 and Table 5).

The specification also does not teach nucleotide sequences encoding a genus of polypeptides having a conserved domain with at least 83% sequence identity to the conserved domain of amino acid coordinates 26-116 of SEQ ID NO:4. The specification further does not teach the nature or extent of the structural or functional homology between the disclosed sequences of SEQ ID NOS: 3 and 4 and the orthologs and homologs identified in databases.

*In re Wands*, 858F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988) lists eight considerations for determining whether or not undue experimentation would be necessary to practice an invention. These factors are: the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples of the invention, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art, and the breadth of the claims.

The full scope of the claimed invention is not enabled because it is unpredictable whether a variant of SEQ ID NOS: 3 or 4 would encode a polypeptide that increases the transgenic plant's tolerance to stress. It is unpredictable because specific protein function requires the presence of particular amino acid residues in specific locations, which particular amino acid residues may not be retained by a variant.

See, for example, Smolen et al., (Genetics, 2002, Vol. 161, pages 1235-1246), who teach that an aspartate to asparagine change in a highly conserved position in the N-terminal region of the R/B basic helix loop plant transcription factor ATR2 causes increased expression of several tryptophan genes as well as a subset of other stress responsive genes in mutant plants expressing the variant sequence as compared to wild-type plants expressing the wild type sequence (page 1238 Figure 2). Smolen et al. also teach that transgenic plants overexpressing the variant sequence exhibit increased purple pigmentation, reduced size, and reduced fertility as compared to transgenic plants that overexpress the wild type sequence (paragraph spanning pages 1239-1240 and Figure 3).

In the instant case Applicant has not provided sufficient guidance with respect to which variants of SEQ ID NOS: 3 or 4 would retain the necessary amino acid residues such that the variant encodes a polypeptide that increases the transgenic plant's tolerance to environmental stresses as broadly claimed. Absent such guidance one skilled in the art would have to make and test each subsequence or fragment or variant in order to discriminate between those protein variants that would be useful for preparing a transgenic plant having increased tolerance to stress and those that would

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not. Such a trial and error experimental approach would constitute undue experimentation.

The full scope of the claimed invention is also not enabled because the ability of a plant transcription factor coding sequence to increase tolerance to different types of stresses is unpredictable. It is unpredictable because the activity of different combinations of genes is required for tolerance to a particular type of stress, such that the ability of a transcription factor polypeptide to increase tolerance to a particular type of stress depends on the extent to which that transcription factor polypeptide activates the expression of the genes whose activity is required for tolerance to that stress.

See, for example, Liu et al. (The Plant Cell, 1998, Vol. 10, pages 1391-1406), who teach that two transcription factors, DREB1 and DREB2, function in two separate signal transduction pathways under low temperature and dehydration conditions respectively. The expression of DREB1 transcription factors is induced by low-temperature stress, whereas the expression of DREB2 transcription factors is induced by dehydration and high-salt stress (page 1398 Figure 6). Furthermore, over-expression of DREB1 in transgenic plants induced the expression of rd29A, a gene whose expression is induced by dehydration, high salt and low temperature stress in non-transgenic wild type plants, whereas over-expression of DREB2 did not induce rd29A expression (page 1402 Figure 11).

In the instant case Applicant has not provided sufficient guidance with respect to which types of environmental stress tolerance would be conferred to plants the express the plant transcription factor coding sequences recited in the claims. Absent such

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guidance one skilled in the art would have to test transgenic plants comprising each plant transcription factor coding sequence under a variety of different conditions in order to discriminate between stress conditions the transgenic plants would tolerate and stress conditions they would not tolerate. Such a trial and error experimental approach would constitute undue experimentation.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. § 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. § 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

14. Claims 1-3, 5, 6, 10-13 and 15 are rejected under 35 U.S.C. § 102(e) as being anticipated by da Costa e Silva *et al* (U.S. Patent 6,677,504, filed 6 April 2001 and claiming benefit of U.S. Provisional Application 60/196,001 filed 7 April 2000) taken with the evidence of Fourgoux-Nicol *et al* (1999, Plant Molecular Biology 40: 857-872).

da Costa e Silva *et al* disclose a recombinant polynucleotide having a domain that is 94.4% identical to amino acid coordinates 26-116 of SEQ ID NO: 4 that binds to a transcription regulating region comprising the CCAAT motif at SEQ ID NO: 23 (see Figure 3G and amino acid positions 34-124). da Costa e Silva *et al* disclose that overexpression in a transgenic *Arabidopsis* plant results in increased tolerance to

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freezing stress compared to a non-transformed plant using a constitutive promoter (Figure 13, column 4, lines 41-44). da Costa e Silva *et al* also disclose that said transgenic plant has increased tolerance to water deprivation (Table 12 at column 45) and increased tolerance to salt (column 46, lines 27-43). da Costa e Silva *et al* disclose a method of producing transgenic plants tolerant to abiotic stress at columns 44-46. da Costa e Silva *et al* disclose producing seed from said transgenic plants and selecting seed (column 46, lines 27-43). Hence, Costa e Silva *et al* had previously disclosed all of the claim limitations.

As related to claims 5 and 13 of the instant application, Fourgoux-Nicol *et al* teach the isolation of a 674bp fragment using a 497bp probe incorporating stringent hybridization conditions comprising three consecutive 30 minute rinses in 2X, 1X and 0.1X SSC with 0.1% SDS at 65°C (page 859, left column, 2<sup>nd</sup> paragraph). Fourgoux-Nicol *et al* also teach that the probe and isolated DNA fragment exhibited a number of sequence differences comprising a 99bp insertion within the probe and a single nucleotide gap, while the DNA fragment contained 2 single nucleotide gaps and together the fragments contained 27 nucleotide mismatches. Taking into account the insertions, gaps and mismatches, the longest stretch of contiguous nucleotides to which the probe could hybridize consisted of 93bp of DNA (page 862, Figure 2). Hence, Fourgoux-Nicol *et al* teach that under stringent hybridization conditions, a wide variety of nucleic acids having low sequence similarity can be isolated. The Office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same, material, structural

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and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the Applicant to provide that the claimed product is different from those taught by the prior art and to establish patentable differences. See *In re Best* 562F.2d 1252 USPQ 430 (CCPA 1977) and *Ex parte Gray* 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989).

***Allowable Subject Matter***

15. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

16. No claims are allowed.



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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at (571) 272-0975. The central FAX number for official correspondence is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-1600.

DAVID H. KRUSE, PH.D.  
PRIMARY EXAMINER



David H. Kruse, Ph.D.  
2 April 2007

18. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

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